

MARYLAND LONGITUDINAL DATA SYSTEM (MLDS)
550 West Baltimore Street
Baltimore, MD 21201

GOVERNING BOARD MEETING

December 8, 2017

MINUTES

The meeting of the Maryland Longitudinal Data System (MLDS) Governing Board was held on December 8, 2017, in the Maryland State Department of Education (MSDE) Conference Room #1 at the Nancy S. Grasmick Building. Dr. Ben Passmore, designee for Governing Board Vice-Chair Dr. Robert Caret, called the meeting to order at 9:05 a.m. and noted that a quorum was present.

The following Governing Board members were in attendance:

- Dr. Jon Enriquez, Director of the Office of Research and Policy, Maryland Higher Education Commission (Designee for Secretary Fielder).
- Dr. Carol Williamson, Chief Academic Officer, Maryland State Department of Education (Designee for Superintendent Salmon)
- Mr. Michael Harrison, Director of the Office of Policy Development, Department of Labor, Licensing, and Regulation (Designee for Secretary Schulz)
- Dr. Ben Passmore, Assistant Vice-Chancellor for Policy, Research, and Analysis, University System of Maryland (Designee for Chancellor Robert Caret)
- Ms. Tina Bjarekull, President, Maryland Independent Colleges and Universities Association
- Dr. Farzad Moazzami, Associate Professor, Acting Assistant Vice President for Academic Affairs, Morgan State University (Designee for President David Wilson)
- Dr. Scot Tingle, Assistant Principal, Snow Hill High School
- Mr. Christopher J. Biggs, Information Assurance Manager, Raytheon Company
- Ms. A.J. Brooks, Privacy Analyst, U.S. Department of Health & Human Services (by phone)
- Mr. Steven Rizzi, Vice President, PAR Government

The following MLDS Center staff members were in attendance:

- Mr. Ross Goldstein, Executive Director, MLDS Center
- Ms. Tejal Cherry, Director of System Management Branch, MLDS Center
- Ms. Laia Tideman, Data Management Coordinator, MLDS Center
- Dr. Angela Henneberger, Director of Research, MLDS Center and Research Assistant Professor, University of Maryland, School of Social Work
- Dr. Michael Woolley, Associate Professor, University of Maryland, School of Social Work
- Ms. Ann Kellogg, Director of Reporting Services, MLDS Center
- Ms. Jamese Dixon-Bobbitt, Executive Associate, MLDS Center

Approval of June 09, 2017 Meeting Minutes

Dr. Passmore asked for a motion to approve the minutes from the September 8, 2017 meeting. Ms. Bjarekull made a motion to approve the minutes that was seconded by Mr. Biggs. The motion was unanimously approved.

Summary of Center Output

Mr. Goldstein welcomed the Board and apologized for the last minute change in the meeting location, which was due to technical problems with the audio-video equipment in the regular 7th Floor Board meeting room.

Ann Kellogg began the presentation on the Center's Output by providing the cumulative results of output for the year. There were:

- 10 dashboards (three on teacher production and seven on dual enrollment patterns);
- Three Center reports;
- One completed report for the Department of Legislative Services (DLS) on college enrollment and graduation outcomes for a cohort of Maryland 12th grade high school exiters;
- 25 presentations including Research Series presentations as well as other presentations at conferences and for stakeholder groups; and
- Other output such as the addition of scrolls on the website and continued work on population attribute, and website redesign.

Next, Ms. Kellogg reported that data requests increased from 11 to 34 during the past year. On average, each request took about 60 hours of staff time to analyze, compile, and review the data requested. The average request utilized 14 different data elements. The requests primarily came from colleges and universities and state agencies. In response to a question from Dr. Passmore, Ms. Kellogg noted that there has been a broadening of who is making the requests as evidenced by the requests from DLS and the University System of Maryland (USM). In response to a question from Mr. Rizzi, Ms. Kellogg explained that the requests are longitudinal because they study different cohorts over time and explore transition points. Five requests were rejected because they didn't request longitudinal data or sought unit record data.

Finally, Ms. Kellogg discussed the collaborative engagements that the Center worked on with state agencies and highlighted the analysis conducted for *Computer Science for All* (a USM initiative) on whether high school computing and/or math classes had an impact on student selection of a computer science major.

Dr. Henneberger, Research Branch Director, continued the Center Output presentation by reviewing the work of the Research Branch over the last year. There were seven Research Series on topics including dual enrollment, brain drain, and workforce outcomes of high school students who do not enroll in college. The Research Branch also produced two information briefs. Finally, the Research Branch received and is working on two research requests. First, Senator Ferguson requested an analysis on the relationship between school-level concentrated poverty and individual student poverty on college and workforce outcomes. Staff has operationalized the research question and is working on creating the analytic data file. Preliminary descriptive statistics are also being generated. Second, DLS asked for an analysis on pathways to successful teaching in Maryland. Specifically the analysis will examine the teacher preparation pipeline and the outcomes associated with teacher preparation by program. Prior to beginning this analysis, Dr. Henneberger convened a group of multiple stakeholders who met to provide input on a plan for the analysis.

MLDS Reports

Annual Report

Mr. Goldstein explained that the Annual Report is mandated by State statute (Ed. Art. § 24-705), which requires:

- An update on implementation of the system and center;
- A list of all studies performed;
- A list of all currently warehoused data that are determined to be no longer necessary;
- Any proposed or planned expansion of data maintained in the database; and
- Recommendations of the Governing Board.

The first requirement, to provide an update on the System and the Center, makes up the bulk of the report. There is a *Highlights* section that points out the Center's collaborative engagements, the increased number of data requests, the improved improved cross-sector matching, and the additional security measures implemented. The report address the second requirement by providing a list of studies, including all data requests and the pathway report. The third and fourth requirements to report on the data removed and added are reflected in the *Data Inventory* changes the Governing Board reviewed and approved at the last meeting. Ms. Bjarekull asked whether staff would be adding clarifications to the pathways document. Mr. Goldstein agreed that additional clarifications were needed and would be added. Mr. Rizzi raised the issue of missing data and the need to identify gaps that, if addressed, would make Center reporting more accurate and complete (such as state tax data). Mr. Goldstein noted that staff compiled the *Data Gap Analysis* and plans to update that document and present it to the Board at the March meeting.

The final part of the report is the Governing Board recommendations. Dr. Passmore noted that generally recommendations focus on external actions - either directing staff to work with another agency or requesting action from a third party (i.e. a legislative change). It was noted that it is too late to recommend a legislative change at this time - legislative changes would have to be considered at the Governing Board's June meeting. Ms. Bjarekull suggested that the Board needs staff to provide analysis on data gaps earlier in the year. This would provide the Board with an opportunity to research what needs to be done to fill those gaps in time to be included the Annual Report. Mr. Rizzi noted that data gaps are generally best understood when reports are being done. Accordingly, staff needs to include caveats and limitations in each report. This will allow the Board to decide which limitations require action.

In response to a question from Mr. Biggs, Mr. Goldstein responded that every report has data limitations - part of the nature of a data set. Nonetheless, there is still a lot that can be done and it is also one of the reasons the Center partners with the university researchers who are very good at managing the limitations and still finding meaningful research opportunities. Mr. Goldstein also noted that staff developed *Data Reporting Standards* that include a section on disclosing limitations and standards for deciding whether data gaps are too significant to allow meaningful reporting. The reporting conducted by the Center consistently adheres to those standards by providing caveats and limitations. Dr. Passmore tabled the discussion on the recommendations for the Annual Report to give Ms. Bjarekull and Mr. Rizzi time to draft a recommendation for the Board's consideration.

2017 Dual Enrollment Report

Laia Tiderman presented the *Annual Dual Enrollment Report*, which is a requirement under State law (Ed. Art. § 24-703.1). This is the Center's fifth *Dual Enrollment Report* and the third one using MLDS data. There are a total of 9,761 dually enrolled Maryland public high school students in academic year 2015-2016, which represents a 14% increase from last year. There was also an increase in participation for FARMS (free and reduced price meals) eligible students, and African American, Hispanic, and Asian students. The majority of dually enrolled students were female, white, and not eligible for FARMS. Dual enrollment participation has seen a steady increase over time. Dual enrollment among FARMS eligible students has also increased over time, but at a slower rate. Ms. Tiderman showed a comparison of the race/ethnicity of dual enrollment students in 2010-2011 and 2015-2016. The comparison shows significant changes - for example a reduction of White students from 71% to 55% and an increase in Black/African American students from 17% to 24%.

In response to a question from Michael Harrison, Ms. Tiderman confirmed that the definition of dual enrollment changed slightly in this year's report. The most significant change was that the definition no longer includes a student who enrolled in college in May, one month before graduating from high school in June. Under the old standard that would have been counted as an overlapping enrollment. However, staff determined that scenario was not consistent with what the General Assembly would consider dual enrollment under the College and Career Readiness and College Completion Act. Finally, in response to a question, Ms. Tiderman also clarified that the Center has no ability to assess the cost of dual enrollment.

Dr. Henneberger stated that the Research Branch is finalizing a report to compliment the dual enrollment report. The report addresses the following question: What are the causal effects of dual enrollment program participation in high school on college and workforce outcomes? One preliminary key finding is the probability of obtaining a college degree is 15 percentage points higher for a student who was dually enrolled in high school in comparison to a student who was not dually enrolled in high school. Another preliminary finding showed that dually enrolled students earned about \$2,000 more than non-dually enrolled students six years after high school. In response to a question, Dr. Henneberger explained that students are matched on a variety of characteristics including demographics, jurisdiction, academic achievement, and attendance.

Dr. Passmore asked whether there are any concerns about the proliferation of legislatively required reports. Mr. Goldstein responded that the reports are not a concern. The purpose of the Center is to inform policy makers. While the Center will certainly answer questions without a legislative mandate - it is good to have the requests on record.

Ms. Bjarekull noted that one of the goals of dual enrollment was to reduce the cost of college, and asked whether the Center can compare the financial aid debt of dual enrollment students and non-dual enrollment students. Dr. Henneberger said that some data is available that may allow for that type of analysis.

More Jobs for Maryland (MJFM) Act Report

Ann Kellogg began by explaining that the More Jobs for Maryland (MJFM) Act required the Center and the Governor's Workforce Development Board to develop annual income earnings goals for high school

graduates who have not earned at least a 2-year college degree by age 25. The Center's contribution to this report was to develop the actual wage trajectories for high school graduates who did not complete at least an Associates degree by age 25. In addition, the Center compared those wages to Living Wage and median wage calculations. For this analysis, the Center used three cohorts of high school students who graduated in 2008, 2009, and 2010 (because those graduates have reached age 25). There were over 170,000 such high school graduates. Any high school graduate that obtained an Associate's degree or higher by age 25 was removed from the population, leaving 105,300 high school graduates available for analysis. The cohort was divided into three groups: students who earned a certificate, students who never enrolled in college, and students who enrolled in some college. Ms. Kellogg showed the earnings trajectories for the three groups, noting that the certificate earners had the highest median income. A comparison of the actual earnings to the living wage and median earnings calculations was also provided. Ms. Kellogg noted that the number of certificate earners was small and that their favorable income trajectory was not consistent across all jurisdictions.

Finally, Ms. Kellogg reported that 42% of the studied population had a median quarterly wage below the living wage at age 25. In 17 counties, median quarterly wages for high school graduates was higher than that for individuals with some college at age 25. Certificate earners were below the living wage in six counties, students with some college or no college enrollment were below the living wage in 11 and seven counties respectively.

Ms. Bjarekull asked whether it is possible to report on the number of unemployed students in this studied population. Ms. Kellogg responded that we do not have unemployment records. All the Center's data can tell us is whether the individual has wages in any given quarter. In response to a follow-up question from Ms. Bjarekull, Ms. Kellogg agreed that federal unemployment data may be a good source to understand unemployment for the studied population.

Mr. Rizzi noted that the conclusion in the report are ultimately based on less than 40% of the total number of high school graduates who never received a college degree. This led to a discussion on the need to better contextualize the information provided so that readers of the report do not make false conclusions based on the limited population being analyzed and the need to take steps to obtain more workforce data (such as data from the Maryland taxes) that can fill in some of the gaps in the Unemployment Insurance data. Mr. Goldstein noted that Center's enabling legislation does not prohibit the inclusion of tax data. Staff has made some initial inquiries, and plans to continue to investigate the feasibility of obtaining the tax data.

Annual Report (continuation from prior discussion)

The Governing Board considered the recommendations drafted by Ms. Bjarekull and Mr. Rizzi. The Board selected Ms. Bjarekull's recommendation:

The Maryland Longitudinal Data System Governing Board recommends that Center output should include a section on any limitations in the analysis due to the lack of data collected and reported to the Center. Prior to each June meeting of the Governing Board, staff should analyze these limitations and make recommendations to the Governing Board on actions needed to address these data deficiencies.

Dr. Tingle suggested including a statement about the limitations of the report and how the noted limitations may impact the interpretation of the output.

Dr. Passmore asked for a motion to approve the report with the inclusion of the recommendation proposed by Ms. Bjarekull and the additional cautionary language suggested by Dr. Tingle. The motion was made by Mr. Biggs and seconded by Mr. Rizzi. The motion was unanimously approved.

External Research Procedures

Mr. Goldstein began by explaining why the *External Research Procedures* were created. Staff started from the position that external researchers can provide value to the Center, because more research gets done and it utilizes researchers with different areas of expertise to answer Center research questions. Further, it is fiscally wise since the Center will not have to pay for the work done by the external researchers. Mr. Goldstein also noted that external researchers are already requesting access as part of grant funded work. Based on other state experiences, the number of requests will continue to increase over time. Accordingly, a well defined, transparent, and organized approach is needed.

Maryland law limits access to the System to authorized staff of the Center. The result of that requirement is that all work using Center data must be work that is done for the Center (and not simply a project solely for the benefit of a researcher). So, the challenge was to structure a process that allows researchers to utilize the MLDS data to work on projects while at the same time ensuring that all work is also for the benefit of the Center. This was achieved by requiring all external research to address a Research Agenda question. In addition, researchers must first provide a Center product, such as a set of tables for a website dashboard or a written policy report. Only after the Center product is received will the researcher be able to further develop the research for publication in a journal or other academic use.

Staff developed these procedures by reviewing other state procedures. There was also a lot of discussion with researchers and stakeholders and several rounds of review with the Center's advisory boards.

In response to a question from Mr. Rizzi, Mr. Goldstein responded that the external research procedures have been shared with all agency counsel and have been carefully reviewed by the Center's Assistant Attorney General, Dawn O'Croinin. Ms. Bjarekull noted that she spoke with Mr. Goldstein prior to the meeting to share several suggestions and concerns about the procedures. Given that this topic has been a point of contention, Dr. Passmore proposed bringing the procedures back at the next meeting to review the changes proposed by Ms. Bjarekull.

Mr. Goldstein noted that pursuant to the procedures, applications will only be accepted from staff or faculty at a Maryland institution. However, a researcher from a non-qualifying institution may apply in partnership with a researcher from a Maryland institution. In response to a question from Mr. Rizzi, Mr. Goldstein confirmed that the appointments are limited to researchers from academic institutions. While an academic researcher could be doing research on behalf of or funded by a corporation, that fact would have to be disclosed on the application, which would allow the various reviewers to decide whether that is acceptable.

Next, Mr. Goldstein turned to the application review process, which begins with an internal Center review. The timeline for the internal review is very short, which Ms. Bjarekull noted would create an undue hardship for the Center. Noting his agreement, Mr. Goldstein agreed that the procedures should be amended to give the Center more time to complete its review. Another proposed change suggested by Ms. Bjarekull is to clarify that a project can be accepted, but delayed due to limited resources to add and work the external researcher. The next step is a review by the Research and Policy Advisory Board followed by a final review and approval by the Governing Board.

After a project is approved, the researcher still must complete the requirements for staff authorization. Those requirements include signing the *Restricted Use Data Agreement*, obtaining any necessary Internal Review Board approval, completing the Center's *Staff Authorization Procedures*, completing all required trainings, and paying the required costs. The *Staff Authorization Procedures* include a criminal history background investigation, a non-disclosure agreement, rules of security behavior, and required review of Center data sharing agreements and the *Data Security and Safeguarding Plan*.

Mr. Goldstein discussed the associated costs that will be charged to external researchers. The costs (which are estimated to be \$1,300) will be waived if the research project is determined to be in the public interest or for a demonstrated financial hardship. Costs will be reduced for graduate students. The cost of the security background investigation will not be waived since they are direct out-of-pockets costs to the Center. Waiver decisions will be reviewed by the Research and Policy Advisory Board.

Once staff authorization is granted, the researcher may begin his or her research. The procedures require periodic progress reports. At the conclusion of the research, the researcher must conduct a suppression review. At the suggestion of Ms. Bjarekull, Mr. Goldstein noted that the procedures will clarify that the ultimate responsibility for proper suppression rests with the Center. Once delivery of the Center product takes place, the Center will release the aggregate, de-identified research product. At that point, the staff will disable the researcher's access and discontinue the staff authorization.

Ms. Bjarekull proposed a motion to have the external research procedures reviewed and approved by the Governing Board at the next meeting. Dr. Passmore proposed that the motion should include an authorization to allow the Center to operate under the procedures as outlined at the meeting until they are brought back for approval. Mr. Biggs offered the motion that was seconded by Ms. Bjarekull. The motion was unanimously approved.

Synthetic Data Project Update

Dr. Mike Woolley, Professor at the University of Maryland, School of Social Work and one of the principal investigators on the Synthetic Data Project, provided the project update. Dr. Woolley began by reminding the Board that the project is funded under the U.S. Department of Education's State Longitudinal Data System Program grant. The overarching goal of the project is to create three gold standard sets of data and then create synthetic replicas of those data sets. The project will also rigorously test the synthetic data sets for both safety (i.e. avoiding disclosure of personal information) and research utility. Once the Governing Board approves the synthetic data sets they will be released for research use.

Dr. Woolley provided a more in depth explanation of what synthetic data is and how it is created. Then, he reviewed the individuals working on the project and how the teams are organized into work groups to complete the gold standard data sets, conduct the synthesization models, and design the database to house the synthetic data. Next, Dr. Woolley explained the benefits that synthetic data will have for the Center. First, the project brings experts in database development and data analysis in ongoing coordination with the MLDS data team, which advances the development of the MLDS. Second, synthetic data are the most effective strategy to allow access to analyzable individual level data to outside researchers and policymakers. Third, synthetic data will solve problems associated with data release and confidentiality. Fourth, synthetic data will expand and leverage the contributions of the MLDS to education and workforce policy and programming across Maryland. Finally, synthetic data will greatly expand the contribution and profile of the MLDS in terms of rigorous education and workforce research on a national level.

Dr. Woolley concluded by reviewing the tasks that have been completed, including the convening of an end user panel, an expert panel, and consultation with other experts in the field. Tasks that need to be completed include developing the second and third gold standard data sets, creating the synthetic versions of all three gold standard data sets, and building the databases to house the synthetic data. Once those steps are completed which is anticipated by fall 2018, the researchers will test the synthetic data sets for safety and research utility. If successful, the synthetic data will be brought to the Board in 2019 for final review and approval.

Regulations

Mr. Goldstein began by noting that the proposed regulations, which make changes to COMAR 14.36.01 and .04 were unanimously approved by the Governing Board at the June 2017 meeting. The regulations were reviewed by the AELR committee and posted in the Maryland Register for public comment. No comments were received. The regulations are now up for final adoption. The regulations are necessary for the Center to be in compliance with the Public Information Act (PIA). The current version of the regulations do not treat longitudinal data requests as PIA requests. Additional conditions and different timeframes were applied to the requests. Based on advice of Assistant Attorney General Dawn O’Croinin, data requests are PIA requests. Therefore, the proposed regulations make changes to reflect the fact that data requests fall under the PIA and must be treated in a manner consistent with the Act. Mr. Rizzi made a motion for final adoption of the regulations that was seconded by Dr. Williamson. The motion was unanimously approved.

Closed Session

Dr. Passmore noted that the Board needed to move into a closed session as permitted under General Provisions Article § 3-305(b)(10), to discuss matters related to public security. Specifically, the reason for the closed session is to avoid the risk of disclosing information about the MLDS IT infrastructure that could compromise the security of the system and the personally identifiable information maintained in the system if made public. Dr. Enriquez made a motion to move to a closed session, which was seconded by Mr. Rizzi. The motion was unanimously approved.

Summary of Closed Session

The closed session was attended by:

- 1. The members of the Governing Board who were in attendance at the open meeting;*
- 2. Ross Goldstein, Executive Director; and*
- 3. Tejal Cherry, Chief Information Officer.*

Ms. Cherry provided an overview of the implementation of the Intrusion Detection System (IDS) and the information that the Center has received from the Cyber ESI, the IDS service provider. Specifically, Ms. Cherry presented the weekly security reports provided by Cyber ESI that summarize the monitoring, a description of events that cause an alert or issue, and additional rules applied to the monitoring services. Ms. Cherry also presented the Threat Assessment document that the Center received from Cyber ESI. That report summarizes known threats (cyberattacks and malware) that have been added to the security profile and are used to enhance the monitoring services.

Adjournment

Mr. Biggs made a motion to adjourn both the open and closed meetings, which was seconded by Ms. Bjarekull. The motion was unanimously approved. The open meeting adjourned at 11:35 a.m. and the closed meeting adjourned at 11:55 a.m.

Respectfully submitted,
Ross Goldstein
Executive Director

Approved: March 9, 2018